

### REMARKS

Claims 1-37 and 39-48 are currently pending in the subject application and are presently under consideration. Claim 48 has been newly added, which is consistent with claims already deemed allowable. A version of all claims can be found at pages 2-14 of this Reply.

Applicants' representatives thank the Examiner for allowing claims 14-19, 22-26, 32, 34, 35, 39, 46, and 47, and respectfully request favorable reconsideration of the remainder of the subject claims view of the comments and amendments herein.

#### **I. Rejection of Claims 1-13, 20, 21, 27-31, 33, 36, and 37 Under 35 U.S.C. §101**

Claims 1-13, 20, 21, 27-31, 33, 36, and 37 stand rejected under 35 U.S.C. §101 as not falling within one of the four statutory categories of invention. It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. The claims at issue are eligible for patent protection under 35 U.S.C. §101.

“The raw materials of the information-age processes, however, are electronic signals and electronically-manipulated data.” *In re Bilski*, 545 F.3d 943, 962, 88 U.S.P.Q.2d 1385 (Fed. Cir. 2008). Hence, patent eligible transformations can relate to transformation of data that represents a physical object or thing. In particular, a patent eligible process need *not* be “required to involve any transformation of the underlying physical object that the data represented. We believe this is faithful to the concern the Supreme Court articulated as the basis for the machine-or-transformation test, namely the prevention of pre-emption of fundamental principles.” *Id.* at 963.

In particular, independent claims 1 and 20 (as well as the above-mentioned claims that depend there from) are directed to methods that the Office Action (dated April 2, 2009) at page 2 deems unpatentable in view of a statutory process examination with respect to the machine-or-transformation test. Applicants' representatives aver that a process that is (1) tied to a particular machine, or (2) transforms an article or object to a different state or thing is eligible for patenting under §101 as indicated at page 2 of the Office Action, citing *In re Bilski*. However, *Bilski* specifically notes that patent eligible processes can transform *data alone* without any transformation whatever on a physical object such as in cases where the transformed data

represents a physical object.

With respect to the claims at issue, claim 1 recites in part, “performing a time domain to frequency domain **transform** operation...performing a frequency domain to time domain transform...” Likewise, claim 20 recites in part, “performing a frequency domain to time domain **transform** operation...” Appreciably, in both cases, it is readily apparent that specific data is undergoing a transformation. Specifically, claim 1 relates to a transformation of data that is at least partially related to a quantity of time, whereas claim 20 relates to a transformation of data that is at least partially related to a frequency of electromagnetic radiation. Moreover, claim 1 relates to very specific data associated with wireless communications networks, namely symbols and tones, with at least a portion of the tones being allocated to a first user. Similarly, claim 20 relates to very specific data associated with wireless communication networks such as orthogonal frequency division multiplexed signals for generating symbol values.

Applicants’ representatives respectfully note that, in the general sense, time is a measure of motion of physical objects or articles. For example, data representative of time is a virtually always based upon a state or configuration of a physical object (*e.g.*, an oscillation or count thereof of a physical object). Accordingly, time-based data recited in the claims at issue can be very specific data representative of physical objects. Hence, the transformation of said data can certainly meet the machine-or-transformation test employed by the Examiner.

Referring specifically to independent claim 20, at pages 2 and 3 the Office Action argues that the claim lacks patentable utility as not producing a useful, concrete, and tangible result. However, the *Bilski* court held that “*the useful, concrete and tangible result inquiry is inadequate*” (*see id* at pgs 959-60) to determine patent eligibility under §101. Accordingly, this rejection is moot as the useful, concrete and tangible result inquiry is neither a portion of nor a necessary condition for the currently applicable machine-or-transformation test.

In view of the foregoing, applicant’s representatives earnestly believe all claims are in condition for allowance and, thus, respectfully request that this rejection be withdrawn.

## **II. New Claim 49**

Furthermore, independent claim 49 has been newly added. In addition to the arguments provided above with respect to claims 1 and 20, claim 49 is believed to be allowable for additional reasons as well. In particular, claim 49 relates to a method that is expressly tied to a

specific apparatus (*e.g.*, a machine).

### III. Allowable Subject Matter

Applicant kindly thanks the Examiner for allowing claims 14-19, 22-26, 32, 34, 35, 39, 46, and 47. Based upon the comments *supra*, it is believed that all claims are in condition for allowance.

### CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicant's undersigned representative at the telephone number below.

If it is determined that fees are due in connection with the filing of this paper, the Commissioner is hereby authorized to charge payment of any fee(s) or any underpayment of fee(s) or credit any overpayment(s) to Deposit Account No. 17-0026. If necessary, Applicant requests, under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application and to charge the fees for a large entity under 37 CFR 1.17(a).

Respectfully submitted,

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